



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Post Office Box 2063
Harrisburg, Pennsylvania 17120

ORIGINAL
(Red)

Bureau of Waste Management

Preliminary Assessment

FOR
RCA CORPORATION
PA #842

City of Lancaster
Lancaster County
Pennsylvania

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History of the Site

RCA Corporation, New Products Division, operates a plant installation within the City of Lancaster located on the south side of New Holland Avenue (Route 23), Lancaster County, PA. The plant is a complex, multiple process manufacturing facility producing various semiconductors, color tubes, electronic component assemblies, various other component units and an electro-plating operation.

Effluent from the industry is treated by a permitted industrial waste treatment plant and then discharged indirectly to the Conestoga River. The facility is currently designated as a RCRA generator and the former impoundment, although no longer in use, falls under RCRA jurisdiction.

The facility was constructed in 1941-42 by the U.S. Navy to be operated by the RCA Victor Division of RCA Corporation for the manufacture of radar equipment. RCA Victor was given the option to purchase the site at the end of the war. Total treatment of the industrial waste at that time was limited to several acid neutralization pits filled with limestone. During the wartime operation there were numerous incidents of stream pollution and fish kills due to releases of toxic wastes from the plant.

Upon assuming operation of the facility after the war, RCA Victor had a waste treatment facility designed and constructed to serve the plant. At that time RCA was granted a permit (1951) and has maintained an appropriate permit for the industrial waste treatment facility to this date.

In 1984 under a Department of Environmental Resources Consent Agreement, RCA modified its industrial waste treatment plant to eliminate use of an impoundment, and upon completion of the plant renovations ceased use of the impoundment in 1985. Under that same agreement, RCA has submitted plans for closure of a quarry used for waste and sludge disposal (upper quarry) and closure of the impoundment (lower lagoon) on the site, as well as pumping and treating groundwater from at least four (4) wells and a spring on the property. The groundwater is treated for removal of volatile organic compounds by an air stripping process. Closure of the quarry and lagoon is proceeding at this time and the groundwater treatment facility is operational.

Nature of Hazardous Material

Waste materials were deposited in the upper quarry by the plant on a regular basis. On at least two (2) occasions, sludge from the impoundment was also deposited in the upper quarry. The volume of sludge deposited is estimated 4,000 cubic yards in the quarry and approximately 12,000 cubic yards remain in the impoundment.

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Analysis of the sludge revealed levels of lead and cadmium both above EP Toxic levels. Temporary sampling wells drilled through the quarry yielded groundwater samples with lead and cadmium levels above drinking water standards as well as the following volatiles:

1. 1, 2, trans - dichloroethylene - 36 microg/L.
2. Vinyl chloride - 2,450 microg/L.
3. Ethylbenzene - 1,300 microg/L.
4. Toluene - 579 microg/L.

No volatiles were identified in the sludge, only in the groundwater.

The sludge of the upper quarry has been removed and stabilized, and placed in the impoundment under a Department of Environmental Resources approved closure plan. Sludge in the impoundment has also been stabilized in preparation for final capping of the site. All water from the quarry and impoundment, as well as groundwater pumped from wells surrounding the sites has VOC's present. This water is pumped and collected for processing through an air stripper unit before discharging to the Lancaster Municipal Sewer System. Volatiles present in the groundwater wells are listed in the attached abstract of a draft EPA Consent Order.

Routes of Contamination

The upper quarry used for sludge deposition is an old limestone quarry on the property. Testing completed in the development of a closure plan has indicated that the bottom of the quarry is in contact with the water table. The impoundment was also developed using an old limestone quarry on the same property. Direct contamination of the groundwater through bedrock fractures is likely. Shallow groundwater is expected to move off the site toward the east to intercept McGrann Run, a tributary of the Conestoga River. Deeper groundwater flows are expected to move beneath McGrann Run and intercept the Conestoga River directly. A monitoring well placed east of McGrann Run has been found to be polluted with site specific contaminants indicating that McGrann Run does not capture all groundwater flows to the east. No monitoring wells have been located east of the Conestoga River.

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Possible Affected Population

The RCA Plant is located within the corporate limits of the City of Lancaster. Virtually all of the surrounding population is served by the Lancaster Municipal Water Supply, which obtains its water from the Susquehanna River (western half of the system) and the Conestoga River (eastern half of the system). Since the two (2) halves of the system are interconnected, the potential for water from one source to move throughout the entire distribution system exists. The Conestoga River intake is (b) (9), the tributary used as the outfall for the industrial waste treatment system at RCA. Groundwater monitoring on the east side of McGrann Run indicates that the tributary has not limited eastward movement of pollutants; therefore pollutants have the potential to enter the Conestoga River upstream from the surface water intake of the public water supply. Pollutants from RCA have the potential to effect the entire municipal system serving approximately 105,000 persons. The only known wells west of the Conestoga River and in proximity to the site are the monitoring wells on the property.

Recommendations and Justifications

The RCA Corporation - Lancaster Site should be rated as high priority in recognition of the documented groundwater pollution present on and about the site and the close proximity of the intake of a municipal water supply. Upon completion of the closure requirements for the quarry and impoundment, it is recommended that EPA Contract for a site inspection due to the potential conflict of the Department of Environmental Resources conducting such an evaluation following implementation of a Consent Agreement.

Permit Violations

The plant was originally constructed for the production of war materials during World War II. No permits or limitations were placed on the site at that time. Following World War II, RCA Victor acquired and maintained the necessary discharge permits for operation of their industrial waste treatment system. The impoundment was incorporated under a state or NPDES Permit until July, 1984.

RCA's impoundment was granted interim status in July, 1981 under RCRA and was subsequently closed in 1985. The closure and groundwater treatment processing are proceeding under a Consent Agreement with the Pennsylvania Department of Environmental Resources dated November 25, 1985.

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Permits Held

RCRA generator: I.D. No. PAD 003026903

NPDES Permit for industrial waste treatment plant: PA0008508.

Air Quality Permit for stack and air stripper emissions.



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
PA 0842

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) RCA Corporation- Lancaster		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER New Holland Avenue			
03 CITY Lancaster	04 STATE PA	05 ZIP CODE 17604	06 COUNTY Lancaster	07 COUNTY CODE 36	08 CONG DIST
09 COORDINATES LATITUDE 40° 03' 12" N LONGITUDE 76° 17' 04" W					
10 DIRECTIONS TO SITE (Starting from nearest public road) East on Route 30 to the Route 23 west exit; west on Route 23 (New Holland Ave.) approximately one-half mile; site on south side of street.					

III. RESPONSIBLE PARTIES

01 OWNER (if known) RCA Corporation, New Products Division		02 STREET (Business, mailing, residential) New Holland Ave.			
03 CITY Lancaster	04 STATE PA	05 ZIP CODE 17604	06 TELEPHONE NUMBER (717) 295 6000		
07 OPERATOR (if known and different from owner) Same		08 STREET (Business, mailing, residential)			
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER ()		
13 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL: _____ (Agency name) <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER: _____ (Specify) <input type="checkbox"/> G. UNKNOWN					
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply) <input type="checkbox"/> A. RCRA 3001 DATE RECEIVED: ____/____/____ MONTH DAY YEAR <input type="checkbox"/> B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ____/____/____ MONTH DAY YEAR <input type="checkbox"/> C. NONE					

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE 12 / 01 / 87 <input type="checkbox"/> NO MONTH DAY YEAR		BY (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input checked="" type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): _____			
02 SITE STATUS (Check one) <input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN		03 YEARS OF OPERATION 1942 current BEGINNING YEAR ENDING YEAR <input type="checkbox"/> UNKNOWN			

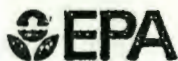
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED Sludge containing metals in excess of EP toxic levels; F 006 Groundwater containing various volatile organic compounds F 001	
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION Documented pollution of groundwater by VOC's and at least two metals in excess of drinking water standards; site adjacent to municipal water source. Possible pollutant entry into surface water upstream from intake.	

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents) <input checked="" type="checkbox"/> A. HIGH (inspection required promptly) <input type="checkbox"/> B. MEDIUM (inspection required) <input type="checkbox"/> C. LOW (inspect on time available basis) <input type="checkbox"/> D. NONE (No further action needed, complete current disposition form)			
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VI. INFORMATION AVAILABLE FROM

01 CONTACT George Mehaffie	02 OF (Agency/ Organization) PA Department of Environmental Resources		03 TELEPHONE NUMBER (717) 657 4588	
04 PERSON RESPONSIBLE FOR ASSESSMENT George Mehaffie	05 AGENCY PA DER	06 ORGANIZATION Waste Mgmt.	07 TELEPHONE NUMBER (717) 657 4588	08 DATE 12 / 11 / 87 MONTH DAY YEAR



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 0842

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

1. PHYSICAL STATES (Check all that apply) <input type="checkbox"/> A. SOLID <input type="checkbox"/> B. POWDER, FINES <input type="checkbox"/> C. SLUDGE <input type="checkbox"/> D. OTHER (Specify) _____ <input type="checkbox"/> E. SLURRY <input type="checkbox"/> F. LIQUID <input type="checkbox"/> G. GAS		2. WASTE QUANTITY AT SITE (Measures of waste quantities must be independent) TONS _____ CUBIC YARDS _____ NO. OF DRUMS _____	3. WASTE CHARACTERISTICS (Check all that apply) <input type="checkbox"/> A. TOXIC <input type="checkbox"/> B. CORROSIVE <input type="checkbox"/> C. RADIOACTIVE <input type="checkbox"/> D. PERSISTENT <input type="checkbox"/> E. SOLUBLE <input type="checkbox"/> F. INFECTIOUS <input type="checkbox"/> G. FLAMMABLE <input type="checkbox"/> H. IGNITABLE <input type="checkbox"/> I. HIGHLY VOLATILE <input type="checkbox"/> J. EXPLOSIVE <input type="checkbox"/> K. REACTIVE <input type="checkbox"/> L. INCOMPATIBLE <input type="checkbox"/> M. NOT APPLICABLE
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III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	16,000	cu. vds.	two locations: 4,000 & 12,000
OLW	OILY WASTE			
SOL	SOLVENTS	unknown		present in groundwater.
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
UAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	Toluene	108 88 3	groundwater	*** 780	ppb
SOL	Benzene	71 43 2	"	220	ppb
SOL	Ethylbenzene	100 41 4	"	2580	ppb
SOL	Vinyl chloride	75 01 4	"	48	ppb
SOL	1,2-Trans-DCE		"	9580	ppb
SOL	Methylene chloride	75 09 2	"	900	ppb
SOL	1,1-Dichloroethylene	75 35 4	"	26	ppb
SOL	1,1-Dichloroethane	75 34 3	"	93	ppb
SOL	Trichloroethylene	79 01 6	"	2900	ppb
SOL	1,1,1-Trichloroethane	71 55 6	"	69	ppb
SOL	Chloroform	67 66 3	"	535	ppb
	** from 1984, December sampling round				
	*** maximum concentration in any well sampled				
SLU	Cadmium	7440 43 9	contained in sludge	> 1000	ppb
SLU	Lead	7439 92 1	"	> 5000	ppb

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PA DER files; draft EPA Consent Agreement with RCA; PA DER/ RCA Consent Agreement;
(records of analyses contained in Agreements)



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 0842

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION 02 ☒ OBSERVED (DATE: present) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: unknown 04 NARRATIVE DESCRIPTION

Documented groundwater pollution with VOC's by sampling from monitoring and pumping wells on the pollution site. Pump and treat system involving at least 4 wells and 1 spring currently in place and operating.

01 ☒ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 105,000 04 NARRATIVE DESCRIPTION

Surface water intake for Lancaster Municipal Water Co. located on Conestoga River less than ¼ mile east; potential for polluted groundwater to migrate east and intercept Conestoga River upstream from intake.

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None

01 ☐ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None

01 ☐ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
(Acres)

None

01 ☒ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 105,000 04 NARRATIVE DESCRIPTION

Surface water intake for Lancaster Municipal Water Co. less than ¼ mile east; potential for polluted groundwater to migrate east and intercept Conestoga River upstream from intake.

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 0842

HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

☐ J. DAMAGE TO FLORA
NARRATIVE DESCRIPTION

02 ☒ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

Unknown- none observed

☐ K. DAMAGE TO FAUNA
NARRATIVE DESCRIPTION (Include name(s) of species)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

Unknown- none observed

☐ L. CONTAMINATION OF FOOD CHAIN
NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None

☐ M. UNSTABLE CONTAINMENT OF WASTES
(Spills/runoff/standing liquids/leaking drums)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

None

☐ N. DAMAGE TO OFFSITE PROPERTY
NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

Unknown

☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None

☐ P. ILLEGAL/UNAUTHORIZED DUMPING
NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None

DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

Limestone quarry used for waste and sludge disposal has been stabilized and capped
Impoundment has been drained, stabilized and in process of being capped;
groundwater pump and treat system in place and operational.

TOTAL POPULATION POTENTIALLY AFFECTED: 105,000

COMMENTS

Consent Agreement between DER/RCA signed in 1985; RCA complying with CA.

SOURCES OF INFORMATION (Cite specific references, e. g., state files, sample analysis, reports)

PA DER files; report submissions to PA DER from RCA; PA DER/RCA Consent Agreement;
draft Consent Agreement between EPA/RCA.

FIELD TRIP SUMMARY REPORT

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This summary should be prepared in conjunction with the Preliminary Assessment, EPA Form 2070-12.

PA Case Number PA 0842 Site Name RCA Corporation-Lancaster

Site Description

Communications and electronics manufacturing operation which includes an electroplating operation; onsite industrial wastewater plant previously included an unlined impoundment and old quarry was used for disposal of sludge periodically. Under Consent Agreement, old quarry has had sludge removed, stabilized, and quarry closed and capped. Impoundment has been drained, stabilized, and closure is proceeding. Groundwater recovery and treatment system in place.

Area of site (acres)

89 Acres

Hazardous portion, if not entire site

3 Acres

Description of processes/operations which took place at the site

Manufacture of war materials-1942 to 1945; manufacture of communications parts & equipment including tubes, semi-conductor units, and an electroplating operation.

Waste handling/disposal practices

1942-1945; acid neutralization pits followed by direct discharge;
1951-1985; IWWTP with unlined impoundment; onsite sludge disposal;
1985- ; IWWTP with treated discharge to tributary of Conestoga Creek.

Site topography and runoff drainage pathways

Surface runoff to municipal stormwater system; limited stormwater runoff to McGrann Run; Shallow GWTR movement east to McGrann Run; deep GWTR east to Conestoga River.

Surface or subsurface drainage areas (leachate) noted?

Waste disposal quarry currently capped;
Impoundment drained, closure in progress.

Odors/stains noted?

None

Stressed vegetation noted?

None

Location and description of streams or receiving waters adjacent to site. Include flow direction and observations. Note location on attached map.

McGrann Run immediately to east of property- refer to attachment 3;
Conestoga River to east of site ¼ mile, flowing to the south; refer to attachment 1.

Monitoring wells on site or in vicinity. Note location on attached map.

Refer to "Plume Determination & Groundwater Recovery Study"
Geraghty & Miller; July 1986. (on file with PA DER)

Population within $\frac{1}{4}$ mile of site:

- ☐ 0-10
☐ 10-100
☒ greater than 100

Population within 1 mile of site:

- ☐ 0-10
☐ 10-100
☐ 100-1000
☒ greater than 1000

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Surrounding land use (woodlot, agricultural, recreation, industrial, etc.)

NORTH

Residential

EAST

Residential

SOUTH

Residential

WEST

Residential

Municipal water supply within 3-mile radius (note use of surface water and/or wells)

Lancaster Municipal Water Co.; surface water intake approx. $\frac{1}{4}$ mile from site on Conestoga River.

Reference: USGS Quad-Lancaster, Pa. PA DER Office- Lancaster, Pa.

Domestic wells. Approximate number within $\frac{1}{4}$ mile: None known
 List nearest wells below and show locations on attached map.

Owner/Resident

Address

Phone

Groundwater flow direction, if known

Generally east to intercept Conestoga River.

Description of odor/taste problems

None reported

State inspection activity (including permits held)

RCRA Generator facility PAD 003 U26 903
 NPDES permit # 0008508 for IWWTP
 Air Quality Permit for stack emissions.

State/Federal/Private remedial activities

Consent Agreement between PA DER/RCA in effect for stabilization and removal of sludge from quarry, followed by capping; draining, stabilization and capping of impoundment in process; pump and treat groundwater system in place for VOC contamination of groundwater.

Additional comments--Further description of site

1000

SITE CONTACTS

Name and Title	Affiliation	Phone
George Burris Manager	RCA	717 299 6500
Thomas Miller Hydrog.	PA DER	717 657 4588
Robert Benvin Facilities Chief	PA DER	717 657 4588

INSPECTION INFORMATION

Name and title of inspector(s) George Mehaffie

Agency PA DER Bur. Waste Mgmt. Phone number 717 657 4588

Date 12/1/87 Time on site 3.5 hrs.

Weather conditions: Fair; cold (52⁰ F)

ATTACHMENTS

- o Topographic map identifying site location. Include name of quadrangle map.
- o Site sketch map showing location of monitoring wells, domestic wells, municipal water supplies, and areas of concern (lagoons, leachate seeps, drums, etc.)
- o Any available sampling results or state monitoring data with map showing sample locations.

Attachment # 1

PA- 0842

Site Location

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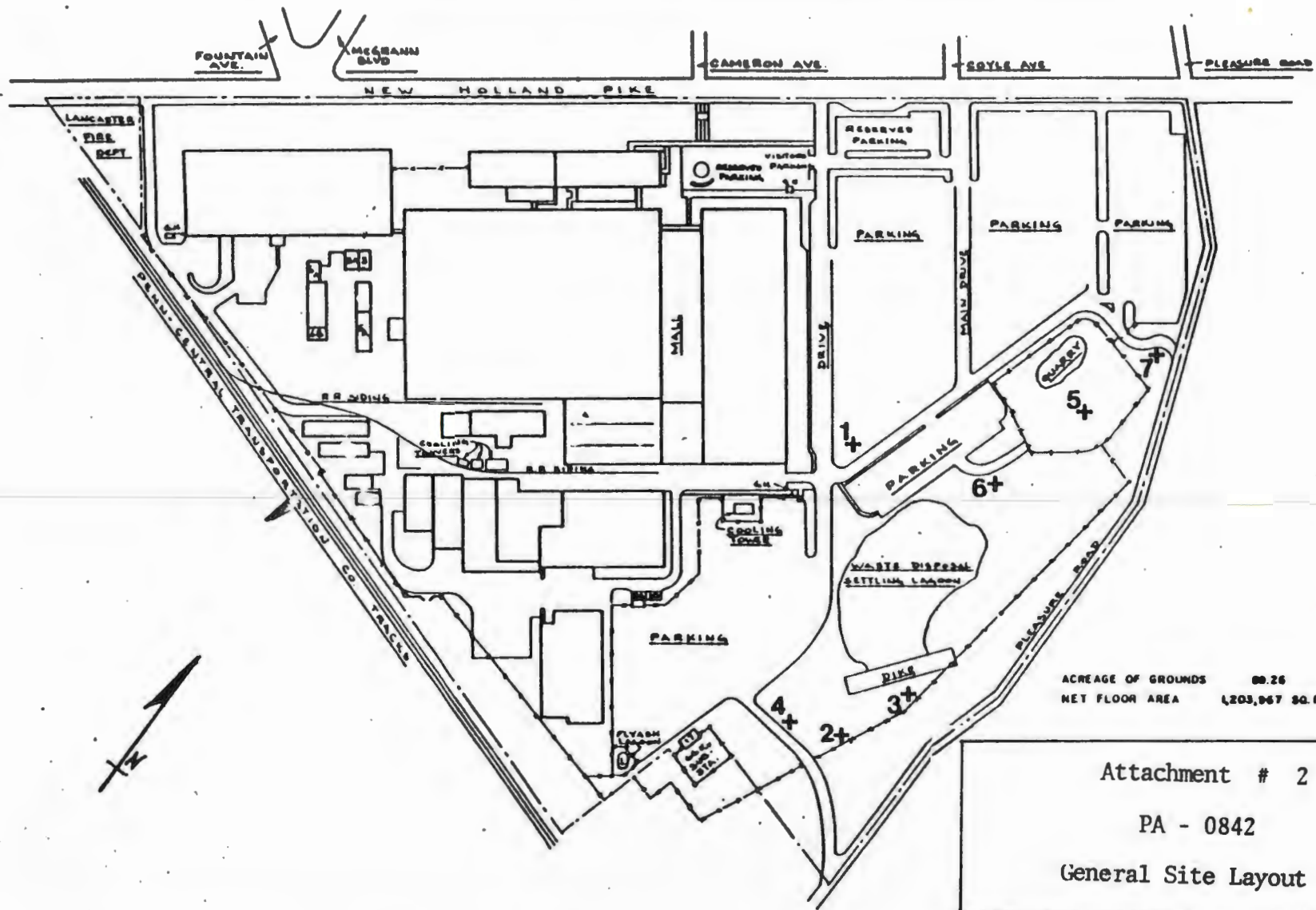


LANCASTER, PA.

N4000—W7615/7.5

1956

PHOTOREVISED 1969 AND 1976
AMS 5764 III SE—SERIES V831



NEW HOLLAND PIKE

ORIGINAL
(Road)

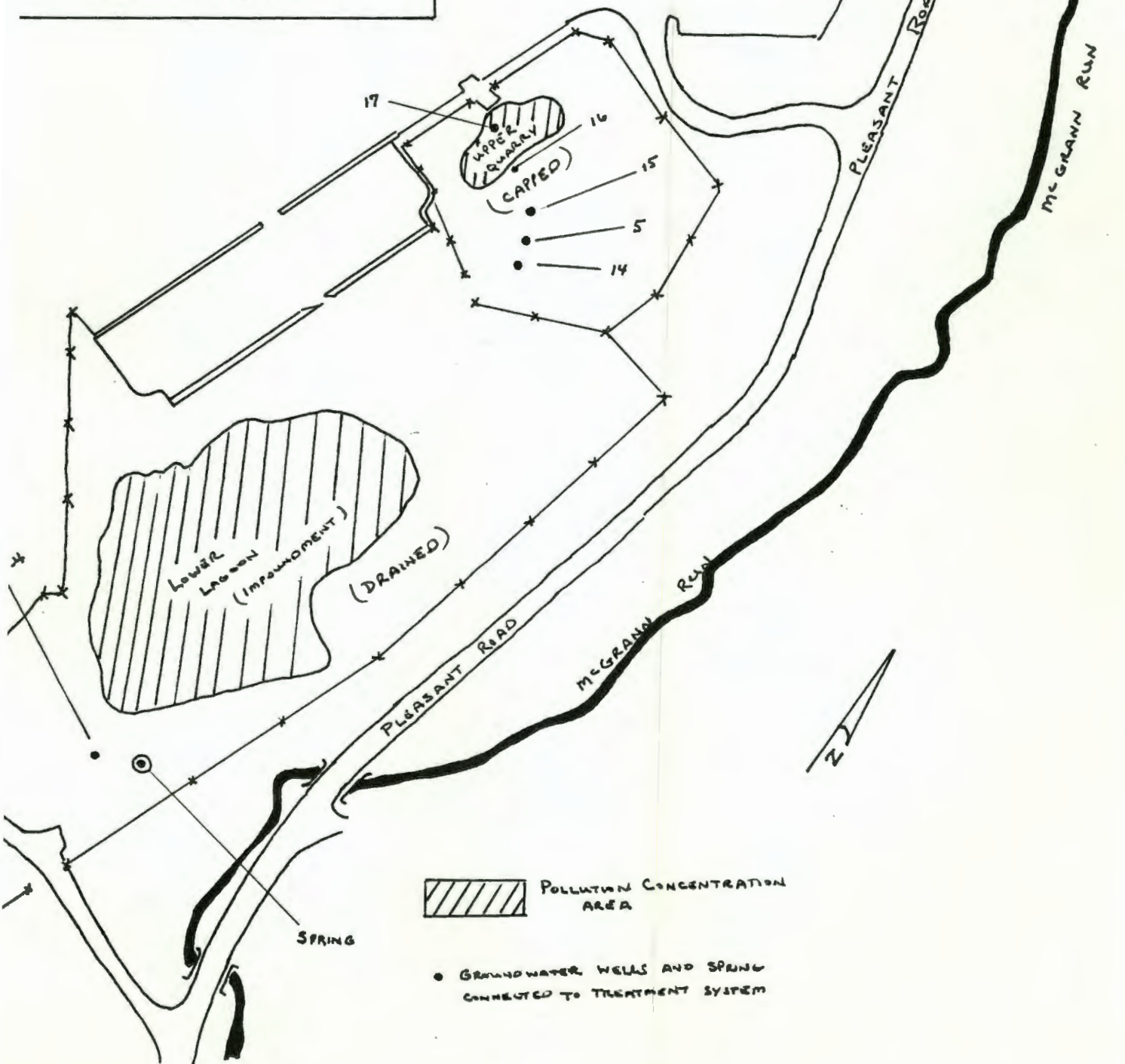
PARKING

PARKING

Attachment # 3

PA - 0842

Pollution Site Sketch



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCESORIGINAL
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In the Matter of: :
: :
RCA Corporation : Closure of Storage Surface
New Products Division : Impoundment; Modification to
Lancaster, Pennsylvania : Wastewater Treatment Plant

CONSENT ORDER AND AGREEMENT

This Consent Order and Agreement is entered into by and between the Commonwealth of Pennsylvania, Department of Environmental Resources (hereinafter "Department") and RCA Corporation, New Products Division, a Delaware corporation (hereinafter "RCA").

FINDINGS OF FACT

The Department and RCA agree to the following findings of fact:

A. RCA operates a complex multiple-process manufacturing facility in Lancaster, Pennsylvania (hereinafter the "facility"). Major operations at the facility include various types of semi-conductor and color picture tube component manufacturing, luminescent material manufacturing, pilot color picture tube production, and miscellaneous processing involving electronic component assembly and testing. An electroplating shop at the facility directly supports various component manufacturing activities. Wastewaters generated by operations at the facility are discharged to a common wastewater treatment plant (hereinafter "treatment plant"). Effluent from the treatment plant discharges into an unlined surface impoundment used by RCA as a sludge settling lagoon (hereinafter "surface

impoundment"). The sludge from the treatment plant is classified as a listed hazardous waste under Section 75.261(h)(2) of the Department's Rules and Regulations, 25 Pa. Code §75.261(h)(2). Sludge from the treatment plant has in the past been disposed of in a second surface impoundment on the site known as the "Upper Quarry" (hereinafter "Upper Quarry"). Effluent discharges from the surface impoundment flow into McGrann Run through an outfall point permitted under NPDES Permit No. PA0008508, issued June 22, 1974.

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B. On October 19, 1982, the Department requested that RCA submit Part B of its Application for a Hazardous Waste Management Facility Permit (hereinafter "Part B Application") under the provisions of 25 Pa. Code, Chapter 75, Subchapter D.

C. On January 28, 1983, RCA requested an extension of time for filing its Part B Application pending the Department's decision on RCA's Request for Determination of Non-Applicability for the sludge contained in the surface impoundment.

D. On March 7, 1983, the Department denied RCA's Request for a Determination of Non-Applicability.

E. On April 6, 1983, representatives of RCA met with representatives of the Department to outline RCA's plans for modifying its treatment plant at the Lancaster site, including closure of the surface impoundment. RCA proposed that the Department withdraw its request dated October 19, 1982 for the Part B Application and, in lieu thereof, allow RCA to close the surface impoundment and implement its planned treatment plant modifications under an agreed-upon time schedule.

F. The Department's Rules and Regulations provide that failure to submit a timely Part B Application, or furnish the full information

required by the Part B Application, shall be grounds for termination of a facility's interim status, 25 Pa. Code §75.265(2)(7).

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G. The Department has issued to RCA Bureau of Water Quality Management Part II Permit No. 3684201 and Water Obstruction Permit No. 37-142, which authorize RCA to construct modifications to the treatment plant and an outfall pipe to the Conestoga River. The Department has also issued to RCA on the date of execution of this Consent Order and Agreement NPDES Permit No. PA0008508, which permits RCA to discharge treated wastewaters from the treatment plant to the Conestoga River in accordance with the effluent limitations contained therein.

H. Consistent with both state and federal requirements, RCA initiated a groundwater monitoring program in connection with its continued operation of the surface impoundment. Test results produced as a result of this monitoring have indicated the presence of certain pollutants above background levels. RCA has implemented, pursuant to applicable federal and state regulations, a groundwater quality assessment program to determine the nature and extent of the impact on groundwater quality in the area of the surface impoundment and Upper Quarry.

I. The Department has determined, based upon RCA's groundwater monitoring results, that groundwater quality has been affected in the area of the surface impoundment, in violation of Section 401 of The Clean Streams Law, as amended, 35 P.S. §691.1, et seq.

J. The Department has advised RCA that it will agree to allow RCA to continue to use its surface impoundment in accordance with the interim status requirements of 25 Pa. Code, Chapter 75, provided that RCA agrees to execute and timely comply with the obligations of this Consent Order and Agreement, including but not limited to implementation

of a Closure Plan and Post-Closure Plan to be submitted to and approved by the Department under the Department's Rules and Regulations, 25 Pa. Code §75.265(o), and implementation of a groundwater quality assessment and abatement program to be reviewed and approved by the Department under the Department's Rules and Regulations, 25 Pa. Code §75.265(n)(13).

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K. The Department has the authority to enter into this Consent Order and Agreement under the provisions of Section 602 of the Pennsylvania Solid Waste Management Act, 35 P.S. §6018.602 ("Act 97"), and Section 610 of The Clean Streams Law, 35 P.S. §691.610 ("CSL").

NOW, THEREFORE, this 26th day of September, 1985, the parties hereto, intending to be legally bound by the mutual covenants, representations and agreements set forth herein do agree as follows:

ORDER

1. RCA shall undertake a Remedial Investigation and Feasibility Study (hereinafter "RI/FS") with respect to the Upper Quarry.
2. On or before June 30, 1985, RCA shall submit a completed RI/FS on the Upper Quarry to both the Department and EPA Region III for review and comment.
3. On or before August 31, 1985, RCA shall submit a revised conceptual Closure Plan to the Department for the integrated closure of the surface impoundment and Upper Quarry.
4. RCA shall implement, or continue to implement, a groundwater quality assessment and abatement plan submitted to and approved by the Department.

5. On or before October 30, 1985, RCA shall complete construction of the treatment plant modifications authorized by Bureau of Water Quality Management Part II Permit No. 3684201.

6. On or before November 30, 1985, RCA shall commence operation of the treatment plant. ORIGINAL (Red)

7. On or before May 31, 1987, RCA shall complete closure of the surface impoundment and Upper Quarry in accordance with the approved final Closure plan.

8. On or before September 30, 1986, RCA shall submit to the Department a final Closure Plan and Post-Closure plan to the Department for approval, which plan shall include detailed plans for the integrated closure of the surface impoundment and Upper Quarry.

9. On or before May 31, 1987, RCA shall commence operation of a groundwater recovery and treatment system.

10. The provisions of Paragraphs 1-9 above shall constitute an Order of the Department issued under Section 602 of Act 97, P.S. §6018.602, and Sections 5 and 610 of the CSL, 35 P.S. §691.5, 691.610, and Section 1917-A of the Administrative Code of 1929, 71 P.S. §510-17, and RCA by its execution of this document acknowledges receipt of said Order.

AGREEMENT

12. The Department agrees to withdraw its request for a Part B Application dated October 19, 1982, and to allow RCA to continue to use its surface impoundment as a sludge settling lagoon in accordance with the interim status requirements of 25 Pa. Code, Chapter 75, provided that RCA timely implements an approved Closure Plan, Post-Closure Plan and post-closure monitoring and groundwater quality assessment and abatement programs, as set forth above.

13. RCA is authorized to continue to discharge treated wastewaters to McGrann Run until February 15, 1986, or until such time as Manheim Township completes installation of its 24" force main, whichever occurs later; Provided, however, that such discharge to McGrann Run shall be in compliance with the effluent limits and monitoring requirements set forth in NPDES Permit No. PA0008508, a copy of which is attached hereto as Exhibit A and made a part hereof.

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(Red)

14. Within 120 days after execution of this Consent Order and Agreement, RCA shall provide to the Department a bond on forms and in the manner provided by the Department's Financial Responsibility Requirements for Hazardous Waste Storage, Treatment and Disposal Facilities, 25 Pa. Code Chapter 75, Subchapter E. The Bond shall be in an amount equal to the total estimated cost to the Commonwealth of completing the approved Closure and Post-Closure Plan, and such measures as may be necessary to prevent adverse effects upon the environment, including but not limited to implementation of the obligations contained in this Consent Order and Agreement.

15. (a) If RCA fails to comply with any of its obligations under this Consent Order and Agreement as a result of any act of God, including extreme weather conditions, or as a result of riot, insurrection, war, pestilence, fire, lightning, earthquake, cyclone, flood, strike, work stoppage or slowdown, unusual delay in equipment or material deliveries, or by the acts or omission of third parties beyond the reasonable control of RCA, including but not limited to delays due in whole or in part to the acts or omission of the Department, or by any other causes beyond RCA's reasonable control, and which RCA, by the exercise of reasonable diligence was unable to prevent, then RCA shall be allowed an extension of time equal to the delay resulting from such cause(s) to perform its obligations.

20. RCA hereby waives any right to appeal from the terms and conditions of this Consent Order and Agreement; Provided that, it is understood that RCA reserves the right to contest any determination or Order issued by the Department which disputes whether RCA has complied with the obligations of this Consent Order and Agreement or with other obligations not expressly referenced in this Consent Order and Agreement.

ORIGINAL
(Red)

21. Prior to the effective date of the transfer of any legal or equitable interest in the facility, RCA shall serve a true and correct copy of this Consent Order and Agreement upon the prospective successor or assignee in interest. Notwithstanding any such transfer, RCA shall remain bound by the terms and conditions of this Consent Order and Agreement, unless any such successor or assignee agrees to be bound by such terms and conditions, and the Department gives written consent to such assumption by that party, which consent shall not be unreasonably withheld or delayed.

22. Unless and until the Department or RCA provides written notice to the contrary, any notices, requests, reports or other correspondence between the parties concerning this Consent Order and Agreement shall be addressed as follows:

(a) Correspondence to the Bureau of Solid Waste Management shall be mailed to:

Regional Solid Waste Manager
Department of Environmental Resources
Bureau of Solid Waste Management
One Ararat Blvd.
Harrisburg, PA 17110

with copy to:

Chief
Division of Compliance and Monitoring
Bureau of Solid Waste Management
Department of Environmental Resources
P.O. Box 2063
Harrisburg, PA 17120

20. RCA hereby waives any right to appeal from the terms and conditions of this Consent Order and Agreement; Provided that, it is understood that RCA reserves the right to contest any determination or Order issued by the Department which disputes whether RCA has complied with the obligations of this Consent Order and Agreement or with other obligations not expressly referenced in this Consent Order and Agreement.

ORIGINAL
(Red)

21. Prior to the effective date of the transfer of any legal or equitable interest in the facility, RCA shall serve a true and correct copy of this Consent Order and Agreement upon the prospective successor or assignee in interest. Notwithstanding any such transfer, RCA shall remain bound by the terms and conditions of this Consent Order and Agreement, unless any such successor or assignee agrees to be bound by such terms and conditions, and the Department gives written consent to such assumption by that party, which consent shall not be unreasonably withheld or delayed.

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P.O. Box 2063
Harrisburg, PA 17120



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Bureau of Water Quality Management
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4590



SEP 26 1985

ORIGINAL
(Red)

Industrial Wastes
City of Lancaster
Lancaster County

Mr. Leonard W. Grove
Manager, Plant Services
RCA (Lancaster Plant)
New Products Division
New Holland Avenue
Lancaster, PA 17604-3140

SUBJECT: Water Quality Management Part I Permit No. PA 0008508

Dear Mr. Grove:

Subject permit is enclosed.

Please study the permit carefully and direct any questions to our Permits staff. Particular attention should be devoted to the limitations expressed in the permit. It is the responsibility of the permittee to provide for the continual treatment of wastewaters and plan for modification of treatment facilities coincidental with expansions or changes in production.

Accompanying the permit is a Discharge Monitoring Report. This is to be submitted as instructed in the permit.

Sincerely,

Leon M. Oberdick
Regional Water Quality Manager
Harrisburg Regional Office

LMO:jvl

Enclosure: Permit
Discharge Monitoring Report

cc: Charles Kleeman, U.S. Environmental Protection Agency

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WATER QUALITY MANAGEMENT

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

INDUSTRIAL PERMIT NO. PA 0008508

ORIGINAL
(Red)

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 et seq. (the "Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 et seq.,

RCA (Lancaster Plant)
New Products Division
Lancaster, PA 17604-3140

is authorized to discharge from a facility located at

City of Lancaster
Lancaster County

to receiving waters named Conestoga River

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B, and C hereof.

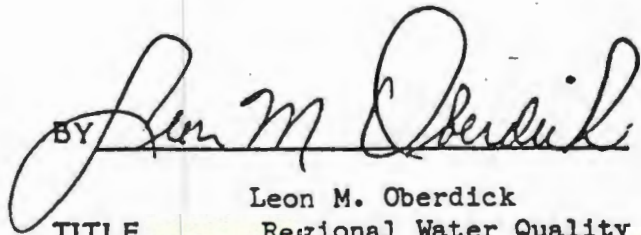
This permit and the authorization to discharge shall expire at midnight,
September 26, 1990

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.
2. Failure to comply with the terms or conditions of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
3. Application for renewal of this permit, or notification of intent to cease discharging by the expiration date, must be submitted to the Department at least 180 days prior to the above expiration date (unless permission has been granted by the Department for submission at a later date), using the appropriate NPDES permit application form. In the event that a timely and complete application for renewal has been submitted and the Department is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit will be automatically continued and will remain fully effective and enforceable pending the grant or denial of the application for permit renewal.
4. This NPDES permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

PERMIT ISSUED

DATE September 26, 1985

BY 
Leon M. Oberdick
Regional Water Quality Manager

TITLE

ATTEST OR WITNESS:

RCA CORPORATION
NEW PRODUCTS DIVISION

Carlton L. Ritz

By: Erich Jurekiewicz 9/11/85
Title: Division Vice President Date
and General Manager

ORIGINAL
(Red)

ATTEST OR WITNESS:

J. H. C. J.

By: Gregory C. Johnson 9/11/85
Assistant Secretary Date

DEPARTMENT OF ENVIRONMENTAL
RESOURCES

George J. Grogan 9-23-85
Assistant Counsel Date
Department of Environmental
Resources

Michael R. Stensie 9/25/85
By: Regional Solid Waste Manager Date

Sean M. O'Rourke 9/26/85
By: Regional Water Quality Manager Date

DRAFT

BEFORE THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III

ORIGINAL
(Red)

-----:	:	Administrative Order
In Re:	:	on Consent
	:	
RCA Corporation	:	Docket No. RCRA-III-008-CA
New Products Division	:	Proceeding Under Section
Lancaster, Pennsylvania	:	3008(h) of the Resource
PAD 00 302 6903	:	Conservation and Recovery
	:	Act of 1976, as amended.
Respondent	:	42 U.S.C. § 6928(h).
-----:	:	

I. JURISDICTION

The United States Environmental Protection Agency ("EPA") issues this ADMINISTRATIVE ORDER ON CONSENT ("Consent Order" or "Order") pursuant to the authority vested in the Administrator of the EPA by Section 3008(h) of the Resource Conservation and Recovery Act of 1976 ("RCRA"), as amended, 42 U.S.C. § 6928(h), and delegated to the Regional Administrators by EPA Delegation Nos. 8-31 and No. 8-32, signed March 6, 1986.

Although, the Commonwealth of Pennsylvania ("State") does not have authority to enforce Section 3008(h), it has participated in the formulation of this Consent Order and agrees with its terms and conditions.

The RCA Corporation, New Products Division, a Delaware corporation ("RCA"), located on New Holland Avenue, in Lancaster, Pennsylvania 17604 is the Respondent. The EPA and RCA enter into this Consent Order pursuant to Section 3008(h) of RCRA, 42 U.S.C. § 6928(h). Without the taking of testimony and without the adjudication of any issue of fact or law, Respondent agrees to undertake all actions required by the terms and conditions of this Consent Order and consents to and will not contest the EPA's jurisdiction regarding this Consent Order. Respondent does not admit any of the factual or legal determinations made by EPA as set forth herein and reserves any rights and defenses it may have regarding liability or responsibility in any subsequent proceeding regarding the RCA site other than proceedings to enforce this Consent Order. This Consent Order shall not constitute or be deemed to be an admission or evidence of liability or responsibility by Respondent with respect to the RCA site.

II. STATEMENT OF PURPOSE

The EPA and the Respondent enter into this Consent Order for the purpose of: (a) formulating a remedial program at the Respondent's manufacturing facility located in Lancaster, Pennsylvania, to isolate to the greatest extent possible groundwater containing volatile organics beneath the facility and to treat such groundwater; (b) implementing a groundwater monitoring system onsite capable of verifying the effectiveness of the remedial program to prevent offsite migration of groundwater and to cleanup onsite groundwater contamination; (c) properly closing a solid waste management unit known as the Upper Quarry.

Attachment # 7

PA - 0842

III. FINDINGS OF FACT

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1. Respondent is a corporation doing business in the Commonwealth of Pennsylvania and is a "person" as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15).

ORIGINAL
(Red)

2. Respondent is a generator of hazardous waste and the owner and/or operator of a hazardous waste management facility located at Lancaster, Pennsylvania (facility). Respondent is engaged in the treatment, storage, and disposal of hazardous waste at the facility.

3. The operation of this facility includes a hazardous waste treatment process, and a surface impoundment for hazardous waste storage, treatment and disposal.

4. Pursuant to Section 3010 of RCRA, 42 U.S.C. § 6930, Respondent notified EPA of hazardous waste activity. In its notification dated August 13, 1980, Respondent identified itself as a generator, treater, storer, and disposer of hazardous waste at the facility. Respondent was assigned EPA I.D. No. PAD 00 302 6903.

5. Respondent submitted to EPA a Part A permit application on November 19, 1980 for its hazardous waste management units, which included the surface impoundment.

6. Respondent's surface impoundment appeared to qualify for interim status under Section 3005(e) of RCRA, 42 U.S.C. § 6925(e) ("interim status") and received notice of this by letter dated July 27, 1981.

7. Respondent's facility consists of:

- A. A centralized treatment plant that treats wastewater from operations which include the manufacture of television tubes and components, electro-optics devices and solid state system products.

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ORIGINAL
(Red)

B. An unlined surface impoundment that was utilized as a sludge settling and storage lagoon for the wastewater treatment process. The impoundment was taken out of service in November 1985 when a new wastewater treatment plant was installed. The hazardous waste in the impoundment is classified as electroplating wastewater treatment sludge (F006). The capacity of the impoundment was 750,000 gallons per day.

C. A former limestone quarry in which F006 sludges from the surface impoundment were deposited in 1966 and 1976. This quarry is not subject to RCRA interim status requirements but is a solid waste management unit (SWMU) under RCRA.

8. Groundwater monitoring wells have been installed in both the surface impoundment and upper quarry areas. Well 1 is the upgradient RCRA well for the surface impoundment. Wells 2, 4, 13, 3D, 3S, 9D, 9S, AW-1, AW-3, AW-4, AW-2D, and AW-2S are located hydraulically downgradient of the surface impoundment. (Wells 2, 3S, and 4 are the hydraulically downgradient RCRA wells). Wells 6, 11D, 11S, 12D, 12S, are located between the upper quarry and the surface impoundment. Wells 5, 14, 7D, 7S, 10D, and 10S are located near the upper quarry. Well 8 is hydraulically upgradient of the upper quarry and surface impoundment areas.

Sampling from 1983 to 1986 indicates the presence of volatile organic compounds (VOC's) in the groundwater. Although RCA has not determined the exact source of the contamination, it nevertheless admits responsibility for it.

Listed below are the groundwater sampling results which indicate elevated levels of VOC's at the facility. (For a detailed map of well locations and sampling results refer to Plume Determination and Groundwater Recovery Study submitted by RCA in July, 1986, attached as Exhibit A and is incorporated herein by reference.)

DRAFT

- A. VOC sampling in 1983 indicated elevated levels of contaminants in the lagoon water and the following wells:

Parameter	10/17/83	Lagoon Water
<u>Selected Organics (ug/l)</u>		
Methylene Chloride		1.4
1,1-Dichloroethene		N/D
1,1-Dichloroethane		N/D
Trans-1,2 Dichloroethene		N/D
1,1,1-Trichloroethane		3.1
Trichloroethene		28.6
1,2-Dichloroethane		N/D
Chloroform		34.2
Benzene		7.7

ORIGINAL
(Red)

ug/l = parts per billion (ppb)
N/D - Not Detected
Source: BCM

LAGOON EFFLUENT CHEMISTRY
RCA LANCASTER

8/26/83 9/15/83 10/17/83

Organics Exceeding 1 mg/l

T.O.C.	36	35	NA
T.O.H.	33	27	NA
Methylene Chloride	1.0	1.4	356
Chloroform	34.2	28.0	9.8
1,1,1-Trichloroethane	3.1	6.0	ND
Bromodichloromethane	3.6	3.9	ND
Trichlorethene	ND	28.6	ND
Benzene	ND	7.7	ND
1,2-Dichloroethane	ND	ND	3.9
1,2-Dichloropropane	ND	ND	1.9

NA - Not Analyzed
ND - Not Detected

GROUNDWATER CHEMISTRY - WELL NO. 1
RCA LANCASTER

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(Red)

		Organics in ug/l				
		3/10/83	6/15/83	8/26/83	9/15/83	10/17/83
<u>Organics Exceeding 1 ug/l*</u>						
T.O.C.	27	82	128	NA	63	
T.O.H.	380	8	8	NA		
Methylene Chloride	NA	NA	<1	16.7	2.1	
1,1,1 - Trichloroethane	NA	NA	ND	<1	2.4	
Trichloroethene	NA	NA	1.4	4.3	3.6	
Chloroform	NA	NA	ND	2.4	<1	
1,2-Dichlorethane	NA	NA	ND	5.5	<1	

NA - Not Analyzed

ND - Not Detected at detection limit of 0.1 ug/l

*Specific organics analysis included purgable halocarbons and aromatics

GROUNDWATER CHEMISTRY - WELL NO. 2
RCA LANCASTER

		Organics in ug/l				
		3/10/83	6/15/83	8/26/83	9/15/83	10/17/83
<u>Organics Exceeding 1 ug/L*</u>						
T.O.C.	24	48	111	NA	57	
T.O.H.	250	89	78	NA	47	
Methylene Chloride	NA	NA	1.6	7.4	2.2	
1,1 Dichloroethene	NA	NA	7.6	11.7	2.4	
1,1 Dichloroethane	NA	NA	19.2	65.0	24.8	
Trans-1,2 Dichloroethene	NA	NA	19.6	200	51.8	
Chloroform	NA	NA	15.1	10.9	3.6	
1,1,1 Trichloroethane	NA	NA	68.2	106	47.9	
Trichloroethene	NA	NA	1.4	4.3	3.6	
1,2 Dichlorethane	NA	NA	ND	1.3	ND	
Benzene	NA	NA	ND	ND	4.7	

NA - Not Analyzed

ND - Not Detected at detection limit of 0.1 ug/l

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ORIGINAL
(Red)

GROUNDWATER CHEMISTRY - WELL NO. 3
RCA LANCASTER

	Organics in ug/l				
	3/10/83	6/15/83	8/26/83	9/15/83	10/17/83

Organics Exceeding 1 ug/l*

T.O.C.	27	60	153	NA	93
T.O.H.	170	32	27	NA	NA
Methylene Chloride	NA	NA	ND	4.5	5.0
1,1 Dichloroethane	NA	NA	4.6	4.1	3.7
Trans-1,2 Dichloroethene	NA	NA	19.6	200	51.8

NA - Not Analyzed

ND - Not Detected at detection limit of 0.1 ug/l

*Specific organics analysis included purgable halocarbons and aromatics

GROUNDWATER CHEMISTRY - WELL NO. 4
RCA LANCASTER

	Organics in ug/l				
	3/10/83	6/15/83	8/26/83	9/15/83	10/17/83

Organics Exceeding 1 ug/l*

T.O.C.	20	40	146	NA	78
T.O.H.	42	130	120	NA	NA
Methylene Chloride	NA	NA	2.1	20.8	3.7
1,1 Dichloroethane	NA	NA	15.6	17.8	8.1
1,1 Dichloroethene	NA	NA	24.3	18.9	18.4
Trans-1,2 Dichloroethene	NA	NA	27.2	136	26.6
Chloroform	NA	NA	35.9	13.6	15.0
1,1,1 Trichloroethane	NA	NA	61.5	84.2	63.1
Carbon Tetrachloride	NA	NA	10.9	14.6	6.9
Trichloroethene	NA	NA	352	371	300
Tetrachloroethene	NA	NA	<1	2.5	2.1

NA - Not Analyzed

ND - Not Detected at detection limit of 0.1 ug/l

*Specific organics analysis included purgable halocarbons and aromatics

GROUNDWATER CHEMISTRY - WELL NO. AW-1
RCA LANCASTER

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ORIGINAL
(Red)

Organics in ug/l

8/26/83 9/15/83 10/17/83

Organics Exceeding 1 ug/l*

T.O.C.	180	NA	103
T.O.H.	27	31	NA
Methylene Chloride	1.8	30.8	ND
1,1 Dichloroethene	3.3	ND	54.5
1,1 Dichloroethane	44.4	38.4	46.9
Trans-1,2 Dichloroethene	65.7	210	1.2
1,1,1 Trichloroethane	44.4	46.6	ND
Trichloroethene	58.3	65.3	58.0
Chloroethane	ND	ND	4.3
Trichlorofluoromethane	ND	ND	1.9
1,2 Dichloroethane	ND	<1	146

NA - Not Analyzed

ND - Not Detected at detection limit of 0.1 ug/l

*Specific organics analysis included purgable halocarbons and aromatics

GROUNDWATER CHEMISTRY - WELL NO. AW-2
RCA LANCASTER

Organics in ug/l

8/26/83 9/15/83 10/17/83

Organics Exceeding 1 ug/l*

T.O.C.	116	NA	74
T.O.H.	51	31	NA
Methylene Chloride	1.8	30.8	ND
1,1 Dichloroethene	3.3	ND	54.5
1,1 Dichloroethane	44.4	38.4	46.9
Trans-1,2 Dichloroethene	65.7	210	1.2
1,1,1 Trichloroethane	44.4	46.6	ND
Trichloroethene	58.3	65.3	58.0
Chloroethane	ND	ND	4.3
Trichlorofluoromethane	ND	ND	1.9
1,2 Dichloroethane	ND	<1	146

NA - Not Analyzed

ND - Not Detected at detection limit of 0.1 ug/l

*Specific organics analysis included purgable halocarbons and aromatics

DRAFT
ORIGINAL
(Red)

B. VOC Sampling in December, 1984 indicated elevated levels of contaminants in the following wells:

Contaminant	Date	Well	Concentration ug/l(ppb)
Chloroform	12/4/84	SW-4	11
	12/8/84	AW-2S	2
	12/4/84	3	400
	12/4/84	5	535
	12/4/84	Lagoon Water	18
1,1,1-Trichloroethane	12/4/84	SW-4	13
	12/8/84	AW-2D	53
	12/8/84	AW-2S	69
	12/4/84	AW-1	43
Trichloroethylene	12/4/84	SW-4	21
	12/8/84	AW-2D	692
	12/8/84	AW-2S	190
	12/4/84	AW-1	42
	12/4/84	3	1600
	12/4/84	5	2900
	12/4/84	Lagoon Water	65
1,1-Dichloroethane	12/8/84	AW-2D	93
		AW-2S	29
		AW-1	14
1,1-Dichloroethylene	12/8/84	AW-2D	26
	12/8/84	AW-2S	3
Methylene Chloride	12/8/84	AW-2S	112
	12/4/84	3	750
	12/4/84	5	900
	12/4/84	Lagoon Water	1350
1,2-Trans-Dichloroethylene	12/5/84	10S	17
	12/8/84	AW-2D	182
	12/8/84	AW-2S	94
	12/4/84	6	41
	12/4/84	AW-1	120
	12/4/84	5	9580
	12/5/84	10D	27
Vinyl Chloride	12/8/84	AW-2S	48
Benzene	12/4/84	5	220
Ethylbenzene	12/4/84	5	2580
Toluene	12/4/84	5	780
	12/5/84	8	11
	12/5/84	10D	13

DRAFT

C. VOC sampling between July, 1985 and April, 1986 indicated elevated levels of contaminants in certain wells. A summary of wells that had total VOC's of greater than 100 ug/l (ppb) and those with less than 100 ug/l (ppb) is given below. (For a list of individual VOC contaminants in each well refer to Exhibit A.)

ORIGINAL
(Red)

Wells with Total Average VOCs >100 ug/L

Well No.	Well Depth (ft.)	Total VOCs
5	52	8,501 ug/L
14	180	6,435 "
AW-3	150	5,618 "
AW-4	115	1,968 "
11S	160	1,280 "
AW-2D	60	840 "
Spring	--	791 "
4	30	362 "
AW-1	14	354 "
AW-2S	35	340 "
6	50	298 "
2	30	254 "

Wells with Total Average VOCs <100 ug/L

Well No.	Well Depth (ft.)	Total VOCs
10S	18	30 ug/L
10D	48	20 "
3S	24	17 "
13	220	17 "
SW-4	-	21 "
9D	43	7 "
11D	423	7 "
7D	110	6 "
3D	273	5 "
12S	79	4 "
SW-1	-	3 "
12D	200	2 "
1	65	2 "
7S	35	1 "
9S	27	0 "
8	68	0 "

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D. VOC sampling in August, 1986 and October, 1986 indicated elevated levels of contaminants in the following wells:

ORIGINAL
(Red)

ANALYSES FOR VOLATILE ORGANIC COMPOUNDS (in ug/L) IN WATER SAMPLES, AUGUST 1986
RCA, LANCASTER, PA

Well Number:	AW-1	AW-2S	AW-2D	1	2	3S	4
Sampling Date:	8/19/86	8/18/86	8/18/86	8/19/86	8/18/86	8/19/86	8/18/86
Laboratory:	LANCASTER	LANCASTER	LANCASTER	LANCASTER	LANCASTER	LANCASTER	LANCASTER

Volatile Organic Compounds

Toluene	<1	2	2	<1	<5	<1	<5
Vinyl Chloride	15	2	4	<1	30	26	<5
1,1-Dichloroethene	<1	3	8	<1	<5	5	<5
1,1-Dichloroethane	12	23	46	<1	26	4	19
trans-1,2-Dichloroethene	130	89	300	1	86	<1	19
Chloroform	4	3	<20	<1	6	<1	13
1,2-Dichloroethane	2	<1	<1	<1	<5	<1	<5
1,1,1-Trichloroethane	11	43	4	<1	29	<1	59
Carbon Tetrachloride	<1	<1	<1	<1	<5	<1	5
Trichloroethene	230	150	710	3	160	<1	170
Tetrachloroethene	<1	<1	<1	<1	<5	<1	33

Indicates less than the detection limit.

DRAFT

ORIGINAL
(Red)

-11-

ANALYSES FOR VOLATILE ORGANIC COMPOUNDS (in ug/L) IN WATER SAMPLES, OCTOBER, 1986
LANCASTER, PA

Well Number:	AW-1	AW-2S	AW-2D	1	2	2#	3S	4	4#
Sampling Date:	10/28/86	10/28/86	10/28/86	10/28/86	10/28/86	10/28/86	10/29/86	10/28/86	10/28/86
Laboratory:	LANCASTER	LANCASTER	LANCASTER	LANCASTER	LANCASTER	LANCASTER	LANCASTER	LANCASTER	LANCASTER

Volatile Organic Compounds

Toluene	<1	<1	1	<1	<1	<1	<1	<3	<3
Vinyl Chloride	47	<1	12	<1	16	15	6	<3	<3
1,1-Dichloroethene	1	<1	13	<1	5	5	<1	6	8
1,1-Dichloroethane	20	26	50	<1	41	38	6	13	15
trans-1,2									
Dichloroethene	92	66	280	<1	58	54	4	15	18
Chloroform	2	4	<5	<1	58	7	<1	12	15
1,1,1-Trichloro-									
ethane	10	48	2	<1	59	61	<1	56	58
Carbon Tetra-									
chloride	<1	<1	<1	<1	<1	<1	<1	4	5
Trichloroethene	65	140	940	2	180	186	1	150	140
Tetrachloroethene	<1	<1	<1	<1	2	2	<1	140	130

- Indicates a replicate sample.

< - Indicates less than the detection limit.

RCA CORPORATION

PA - 0842

LANCASTER, PA

CLOSURE OF LOWER LAGOON AND UPPER QUARRY

REPORT OF ACTIVITIES

JUL 15, 1987

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This is the first monthly report summarizing the activities during May and June, 1987 related to the closure of the Lower Lagoon and Upper Quarry Site as presented in the Closure Plan and described by the construction plans and specifications.

Closure of the Upper Quarry began on May 18, 1987 with dewatering activities. The Lower Lagoon closure began on May 27, 1987. Work has progressed on schedule with the following notable events occurring as indicated. All applicable compliance dates have been met.

Operation of the groundwater pumps significantly reduced the water level in the Upper Quarry; deep test pits dug during removal of the overburden encountered no water. Water level readings have been taken at regular intervals; these data will be used to determine the impact on the water tables of pumping the recovery wells.

SIGNIFICANT EVENTS

- 05-11-87 Air stripper system was started up using clean water. Effluent pumped to City of Lancaster sanitary sewer.
- 05-18-87 Work began in Upper Quarry with the start-up of wells 15 and 16 to dewater the quarry.
- 05-26-87 Well 19 TV inspection completed.
- 05-27-87 Work began in Lower Lagoon preparing for physical stabilization of sludge in lagoon.
- 05-28-87 Well 14 started pumping, this well is expected to be the major pumping well on the site due to its influence on groundwater over a large portion of the site. Water was pumped to the stripper building, discharge to City sewer.
- 05-28-87 Work was started on removing overburden from sludge in Upper Quarry.
- 05-29-87 Wells 5, AW-4 and the Springwater pumps were put into service today.

06-03-87 Work begins on Lower Lagoon stabilization of sludge using lime and flyash.

06-04-87 Started pumping Lower Lagoon surface water to wastewater treatment plant.

06-05-87 Air strippers put into operation on well water.

06-08-87 Upper quarry sludge fully exposed; sludge samples taken for stabilization testing and analysis.

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Groundwater which is pumped from the wells is metered prior to discharged to the City of Lancaster sanitary sewer. Volume discharged is given below:

<u>Month (1987)</u>	<u>Gallons Discharged</u>
May	484,410
June	751,190

A sample was taken of the influent to the air stripper and the discharge to the sanitary sewer on June 24. The VOC analysis of these samples is given below:

<u>Source</u>	<u>Volatile Organics (mg/L)</u>
Influent	1.433
Effluent	0.039

Removal Efficiency: 97 %

In summary, the Lower Lagoon and Upper Quarry site closure is proceeding on schedule. The groundwater pumping system is capturing the groundwater effectively; volatile removal by the air stripper is producing an effluent well below the level (2 mg/L) required for discharge to the City system.

JUL 14 '87 15:29
Chester Laboratories

A Division Of

The Chester Engineers

P.O. Box 9356

Pittsburgh

Pennsylvania 15225

Phone: (412) 269-5700

**Laboratory Analysis Report
For**

RCA Corporation
Lancaster, Pennsylvania

Samples Received: 6/25/87

Report Date: 7/14/87

Analyses

<u>Source</u>	<u>Stripper Plant Influent</u>	<u>Stripper Plant Effluent</u>
Log no. 87-	06441	06442
Date Collected	6/24/87	6/24/87
Acrolein, µg/L	<5	<5
Acrylonitrile, µg/L	<5	<5
Benzene, µg/L	<5	<5
Bromoform, µg/L	<5	<5
Carbon Tetrachloride, µg/L	<5	<5
Chlorobenzene, µg/L	18	<5
Chlorodibromomethane, µg/L	<5	<5
Chloroethane, µg/L	<5	<5
2-Chloroethylvinyl Ether, µg/L	<5	<5
Chloroform, µg/L	6.7	<5
Dichlorobromomethane, µg/L	<5	<5
1,1-Dichloroethane, µg/L	30	<5
1,2-Dichloroethane, µg/L	<5	<5
1,1-Dichloroethylene, µg/L	14	<5
1,2-Dichloropropane, µg/L	<5	<5
cis-1,3-Dichloropropene, µg/L	<5	<5
trans-1,3-Dichloropropene, µg/L	<5	<5
Ethylbenzene, µg/L	<5	<5
Methyl Bromide, µg/L	<5	<5
Methyl Chloride, µg/L	<5	<5
Methylene Chloride, µg/L	12	29
1,1,2,2-Tetrachloroethane, µg/L	<5	<5
Tetrachloroethylene, µg/L	20	<5
Toluene, µg/L	<5	<5
1,2-Trans-Dichloroethylene, µg/L	182	<5
1,1,1-Trichloroethane, µg/L	152	<5
1,1,2-Trichloroethane, µg/L	<5	<5
Trichloroethylene, µg/L	998	10
Vinyl Chloride, µg/L	<5	<5

3445-94

- Unless otherwise noted, analyses are in accordance with the methods and procedures outlined and approved by the Environmental Protection Agency and conform to quality assurance protocol.
- "Less-than" (<) values are indicative of the detection limit.

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